AVIATION WEEK
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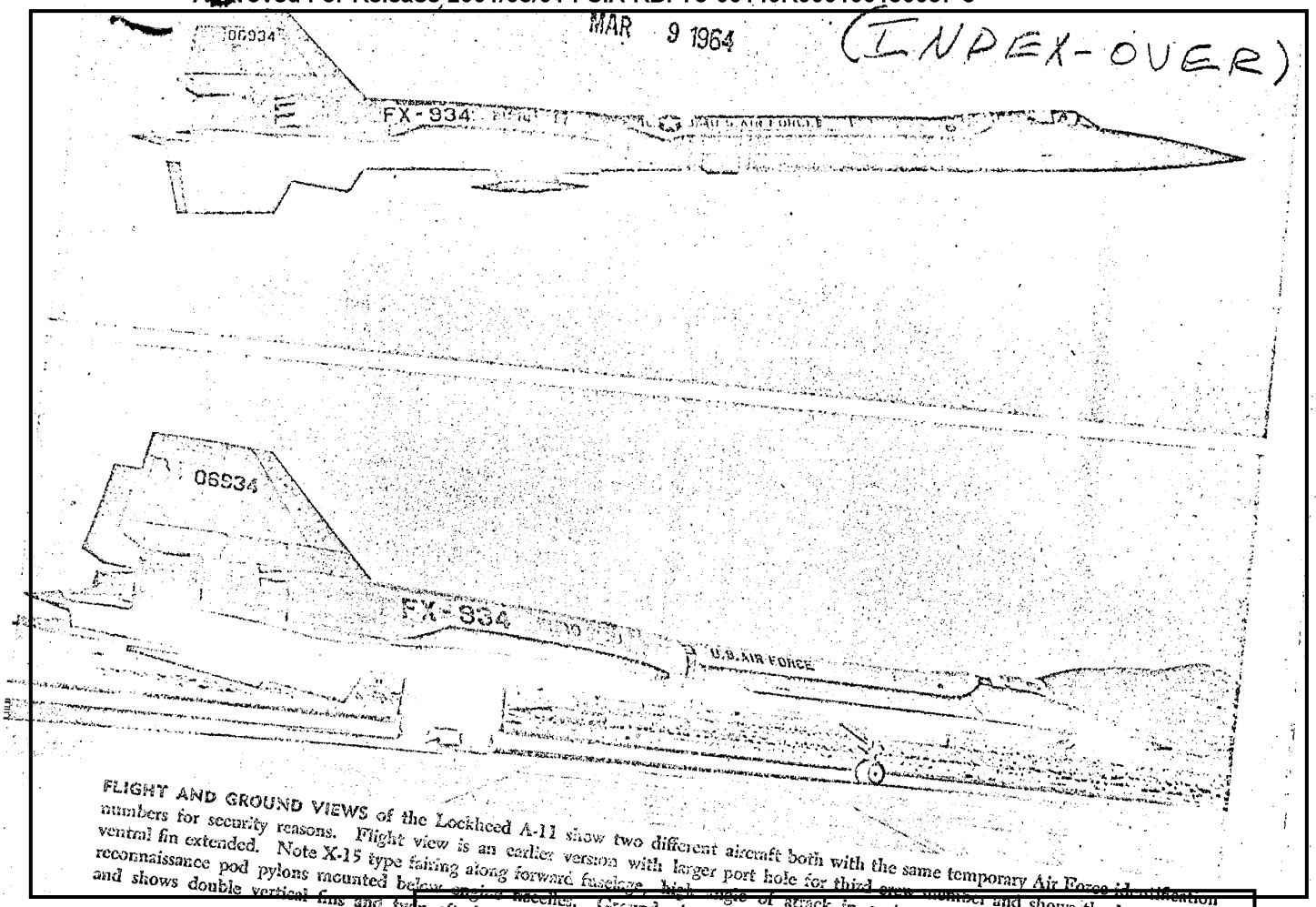
(INDEX-OVER)



FLIGHT AND GROUND VIEWS of the Lockheed A-11 show two different aircraft both with the same temporary Air Force identification numbers for security reasons. Flight view is an earlier version with larger port hole for third crew member and shows the large folding ventral fin extended. Note X-15 type fairing along forward fuselage, high angle of attack in cruise attitude and streamlined electronic reconnaissance pod pylons mounted below engine nacelles. Ground view of later model was taken at secret Nevada operational base and shows double vertical fins and twin afterburner configuration. Razor thin double delta-wing is barely visible from side.

A-11 Proven in Reconnaissance Missions

Washington—Lockheed A-11 is a Mach 3.5 special-purpose aircraft that has already flown long-range reconnaissance missions over communist territory. During operations over the past two years, it has proved its ability to outfly any air defense system now in operational use.

The A-11 was originally designed primarily for long-range reconnaissance and other clandestine missions at altitudes exceeding 100,000 ft. Because of its size, range and altitude performance it is also capable of specialized precision nuclear strike missions. Top Defense Dept. officials deny that it now has such a role.

First public disclosure of the A-11's existence was made on Feb. 29 by President Johnson in his first nationally televised press conference here. He said the A-11 had been tested in sustained flight at speeds greater than 2,000 mph. at altitudes above 70,000 ft.

The A-11, which is a Lockheed Aircraft Corp. designation and not a military identification, has been under development since 1959 as a successor to the U-2 reconnaissance aircraft that flew unmolested over the Soviet Union, China and other Iron Curtain countries for four years between 1956 and 1960.

Lockheed won a design competition in 1958 for the U-2 successor, with Convair's Ft. Worth Div., Boeing, and North American as its competitors. The A-11 development project was headed by Clarence L. (Kelly) Johnson, who designed the U-2 in the same maximum security area of the Lockheed Burbank, Calif., plant known as the "Skonk Works."

The first A-11 was trucked in subassemblies from Burbank to a secret Nevada base known as "The Ranch" in 1961 in a series of specially-built vehicle. It was assembled and flight-tested from this base late in 1961, a little more than two years after the project began. At least eight A-11 aircraft have been operating from this Nevada base during the past two years. A total of 50 aircraft are on order.

Like its predecessor, the U-2, the Lockheed A-11 has been optimized for maximum speed at maximum possible altitude, reaching its top speed slightly above 70,000 ft. and retaining speed above Mach 2 up to 100,000 ft. It is the first military aircraft in the world to achieve sustained Mach 3 flight, and it has a range considerably in excess of the U-2's 4,000-mi. capability. The A-11 airframe design draws heavily on the technology of the North American X-15 research aircraft, which has reached a maximum speed of 4,104 mph. for short periods, combined with Lockheed's earlier supersonic experience with its F-104 Mach 2 interceptor and its X-17 hypersonic ramjet research vehicle.

The A-11 design, like that of the U-2, was optimized for the maximum performance level at considerable sacrifice in structural strength and its han-